

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

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In the Matter of	)	
	)	
2000 Biennial Regulatory Review --	)	IB Docket No. 00-248
Streamlining and Other Revisions of Part 25 of	)	
the Commission's Rules Governing the Licensing	)	
of, and Spectrum Usage by, Satellite Network	)	
Earth Stations and Space Stations	)	
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**COMMENTS OF ASTROLINK INTERNATIONAL LLC**

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March 26, 2001

## SUMMARY

Astrolink supports the Commission's efforts to reduce the regulatory burdens associated with the provision of satellite services in the United States. Appropriate revisions to the FCC's earth station licensing rules and procedures will both facilitate the provision of existing satellite services and accelerate the introduction of next-generation satellite services to the public. In this connection, the Commission should ensure that changes to the earth station licensing rules promote the introduction of additional satellite services in a manner that does not unduly burden or otherwise undermine the provision of authorized satellite operations.

Astrolink notes that unlike the Commission's rules and procedures for C-band and Ku-band earth station licensing, there is no distinction between routine and non-routine earth stations for purposes of Ka-band earth station licensing. As a result, Astrolink does not believe that the Commission intended to subject Ka-band earth station applicants to the additional procedures embodied in proposed Section 25.220, and requests that the Commission clarify that the proposals concerning streamlined processing of non-routine earth station applications do not apply in the context of Ka-band earth station licensing.

However, several of the licensing changes proposed for mobile earth station terminals ("METs") should be applied at Ka-band. For instance, Astrolink supports the relaxation of the construction completion requirement for both METs and blanket-licensed Ka-band user terminals, but does not support the Commission's proposals limiting renewal applications or imposing reporting and implementation requirements. Astrolink agrees that the Commission should extend the maximum earth station license period to 15 years, and urges the Commission to extend the license period for associated space stations that have not yet become operational.

Astrolink does not support the Commission's proposed rule changes relating to Aloha multiple access schemes. The proposed 3 dB reduction in power for all time division multiple access ("TDMA")/Aloha earth stations is overly simplistic and is not tailored to address the complex issues associated with multiple access schemes. Instead of an unnecessarily restrictive across-the-board power reduction, Astrolink supports a more flexible approach that addresses the time-varying nature of the potential interference similar to those proposed by Hughes Network Systems and Spacenet Inc. in prior filings with the Commission.

Finally, Astrolink supports many of the miscellaneous changes proposed by the Commission to update its rules because they are necessary to reflect changes in policy and circumstances. However, Astrolink requests that the Commission clarify that its proposal to apply C-band and Ku-band power limits to other frequency bands applies only to neighboring spectrum and where such limits would be consistent with the satellite operations proposed in those bands.

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**COMMENTS OF ASTROLINK INTERNATIONAL LLC**

ASTROLINK International LLC ("Astrolink"), by its attorneys, hereby submits its Comments in the above-referenced proceeding.<sup>1</sup> Astrolink is the licensee of the Astrolink System, a geostationary satellite orbit ("GSO") fixed-satellite service ("FSS") system that will provide advanced broadband satellite communications services using Ka-band frequencies. Many of the earth station licensing changes proposed in the *NPRM* may affect Astrolink's ability to implement its next-generation Ka-band satellite system.

**I. INTRODUCTION**

Astrolink supports the Commission's efforts to reduce the regulatory burdens associated with the provision of satellite services in the United States. Appropriate revisions to the FCC's earth station licensing rules and procedures will both facilitate the provision of existing satellite

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<sup>1</sup> 2000 Biennial Regulatory Review – Streamlining and Other Revisions of Part 25 of the Commission's Rules Governing the Licensing of, and Spectrum Use by, Satellite Network Earth Stations and Space Stations, *Notice of Proposed Rulemaking*, IB Docket No. 00-248 (rel. Dec. 14, 2000) ("*NPRM*").

services and accelerate the introduction of next-generation satellite services to the public, including to those in rural and underserved areas.

Astrolink believes that the touchstone for any proposed change to the Commission's earth station licensing rules is whether the modification promotes the introduction of additional satellite services in a manner that does not unduly burden or otherwise undermine the provision of authorized satellite operations. It is also important that the Commission's rules provide a framework in which satellite systems can operate without causing or receiving unacceptable interference. Thus, in developing a more streamlined and less restrictive framework for earth station licensing, the Commission must ensure that procedural and substantive changes do not inadvertently increase the burdens associated with the provision of satellite services or unnecessarily restrict existing or planned earth station operations, while still ensuring compatible operation of satellite systems.

Where proposed rule modifications enhance the ability of licensees to provide satellite communication services and otherwise would be appropriate in the context of Ka-band operations, Astrolink urges the Commission to adopt parallel changes for Ka-band earth station licensing. As discussed below, several of the streamlining initiatives proposed for C-band, Ku-band, and Mobile-Satellite Service ("MSS") earth stations also may facilitate the provision of advanced broadband satellite services at Ka-band.

## **II. STREAMLINED LICENSING OF NON-ROUTINE EARTH STATIONS**

In the *NPRM*, the Commission proposes to streamline the licensing of "non-routine" earth stations.<sup>2</sup> Specifically, the Commission proposes to afford streamlined processing to an

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<sup>2</sup> "Non-routine" earth stations are earth stations that do not comply with the 2° spacing technical standard (antenna gain patterns and power levels) set forth in Part 25 of the Commission's rules. *See* 47 C.F.R. Part 25.

earth station application proposing to use a non-routine antenna if the applicant demonstrates compatibility with the Commission's 2° spacing policy by either (i) reducing the earth station's input power, and thus its off-axis e.i.r.p., to a level no greater than that of a compliant earth station transmitting at maximum permissible power; or (ii) submitting affidavits from satellite operators with which the earth station seeks to communicate that they have coordinated those operations with other satellite operators up to 6° away, and a certification that the applicant will comply with all coordination agreements reached by the satellite operators.<sup>3</sup> In addition, the Commission proposes to afford streamlined processing to an earth station application proposing to operate at non-routine power levels if the applicant demonstrates compatibility with 2° spacing by submitting a similar certification and affidavits from satellite operators.<sup>4</sup>

At this stage, Astrolink is limiting its comments to the applicability of the Commission's proposed rules to Ka-band satellite systems. Astrolink notes that unlike the Commission's procedures for C-band and Ku-band earth station licensing, there is no explicit distinction between routine and non-routine earth stations for purposes of Ka-band earth station licensing. Rather than mandating specific antenna gain pattern requirements and power limits, the Commission adopted off-axis e.i.r.p. spectral density criteria for Ka-band earth stations that permit applicants to "trade-off" antenna performance versus power in light of their specific earth station designs and service requirements.<sup>5</sup> Moreover, the Ka-band earth station licensing rules

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<sup>3</sup> See *NPRM*, ¶¶ 15-24; see also *id.* at App. B (proposed Section 25.220).

<sup>4</sup> See *id.*, ¶¶ 31-33; see also *id.* at App. B (proposed Section 25.220).

<sup>5</sup> See 47 C.F.R. § 25.138(a). This approach is similar to the "power reduction" proposal for streamlined processing of applications for earth stations using a non-routine antenna. See *NPRM*, ¶¶ 15-19; see also *id.* at App. B (proposed Section 25.220).

already permit operations at higher off-axis e.i.r.p. levels to the extent such operations can be coordinated.<sup>6</sup>

However, it is not entirely clear from the text of the NPRM or the proposed rules that the procedural changes proposed by the Commission apply only to non-routine C-band and Ku-band earth station licensing. Given the current off-axis e.i.r.p. approach and lack of distinction between routine and non-routine stations in Ka-band earth station licensing, Astrolink does not believe that the Commission intended to subject Ka-band earth station applicants to the additional procedures embodied in proposed Section 25.220. Accordingly, Astrolink respectfully requests that the Commission clarify that the proposals concerning streamlined processing of non-routine earth station applications do not apply in the context of Ka-band earth station licensing.

### **III. MODIFICATION OF CERTAIN EARTH STATION REQUIREMENTS**

Because mobile earth station terminals (“METs”) and Ka-band user terminals both typically will be licensed pursuant to blanket earth station authorizations, several of the licensing changes proposed for METs would be equally applicable in the context of Ka-band blanket licensing. In this connection, Astrolink supports the relaxation of the construction completion requirement for METs and Ka-band user terminals, but does not support the Commission’s proposals limiting MET renewal applications or imposing reporting and implementation requirements. However, Astrolink does support extending the maximum earth station license period to 15 years, and urges the Commission to extend the license period for associated space stations that have not yet been deployed.

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<sup>6</sup> See 47 C.F.R. § 25.138(b). This approach is similar to the affidavit requirement proposed by the Commission. See *NPRM*, ¶¶ 20-24 and 31-33; see also *id.* at App. B (proposed Section 25.220).



#### **A. Relaxation of Construction Completion Requirements**

Section 25.133(a) of the rules currently requires earth station licensees to complete construction of their earth stations within one year of license grant.<sup>7</sup> However, the Commission has eliminated the construction completion requirement in the context of VSAT networks, where multiple earth stations are authorized under a single blanket license.<sup>8</sup> In the *NPRM*, the Commission similarly proposes to relax the construction completion requirement for METs. Specifically in cases where multiple METs have been authorized pursuant to a single blanket license, the Commission proposes to revise Section 25.133 to require MET licensees to bring their *networks* (rather than all authorized earth stations) into use within one year of license grant.<sup>9</sup> Astrolink agrees that no policy goal is served by requiring a MET licensee to construct all authorized terminals within one year, and thus supports the Commission's proposal.

The same reasoning that supports modification of Section 25.133 for blanket MET licensees also support relaxation of the construction completion requirement for Ka-band blanket earth station licensees. Like MET licensees, Ka-band blanket earth station licensees will be authorized to operate large numbers of user terminals to be deployed during the operational lifetime of the associated Ka-band satellite system. No public interest objective is served by requiring Ka-band blanket earth station licensees to bring all authorized earth stations into use within one year of license grant.

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<sup>7</sup> See 47 C.F.R. § 25.133(a).

<sup>8</sup> See Streamlining the Commission's Rules and Regulations for Satellite Application and Licensing Procedures, *Report and Order*, 11 FCC Rcd 21581, 21592 (1996).

<sup>9</sup> See *NPRM*, ¶ 46; see also *id.* at App. B (proposed Section 25.133). Of course, to the extent an associated satellite system receives an extension of its implementation milestones, a MET licensee should receive a similar extension.

Furthermore, imposing a one-year construction requirement undermines the fundamental advantage of a blanket earth station license – the ability to operate any number of earth stations during the license term up to the maximum permitted by the license. Indeed, a blanket license applicant typically requests authority to operate the total number of terminals expected to be deployed over the entire license period, rather than merely during the first year of the license term. In this way, the blanket licensee obtains the operational flexibility necessary to accommodate additional earth station users over time as its business grows. Accordingly, Astrolink urges the Commission to relax the construction completion requirement for Ka-band blanket earth station licensees in the same manner proposed for MET licensees.

#### **B. Limiting MET Renewal Applications**

However, Astrolink does not support the Commission’s proposal to limit the renewal of MET licenses to only that number of earth stations actually brought into use at the time of renewal.<sup>10</sup> The very fact that a licensee seeks renewal establishes that there is a continuing need to operate the subject MET. To the extent a licensee seeks to deploy additional METs of that type, it should be permitted to specify an appropriate number of terminals in the context of its renewal application.<sup>11</sup> Automatically limiting the number of METs authorized in the context of a renewal application to those already in operation would effectively preclude additional growth of licensee’s business, and would require the licensee to file a new application for the very same type of earth station that is the subject of the renewal application. Such an approach is a waste of Commission and licensee resources and would be directly contrary to the Commission’s goal of

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<sup>10</sup> See *NPRM*, ¶ 46.

<sup>11</sup> Of course, if deployment of a particular MET has been discontinued and ongoing operations represent legacy equipment only, the MET licensee should so specify.

streamlining earth station licensing. Thus, Astrolink believes that MET license renewals should not be automatically limited to the number of terminals already brought into operation.<sup>12</sup>

### **C. MET Reporting and Implementation Requirements**

In addition, Astrolink does not support the proposal to require MET licensees to file periodic reports disclosing the number of terminals in use, or to bring a certain percentage of the authorized terminals into use within a specified period of time after grant of their licenses.<sup>13</sup>

METs typically are licensed in exclusive satellite spectrum and operate with an individual satellite system pursuant to strict service rules. As a result, the number of METs in operation generally does not affect the interference environment or intra-system sharing. Thus, there is no technical reason to monitor MET deployment as proposed by the Commission. Moreover, the precise extent of earth station deployment during any given period may constitute sensitive business information that a MET licensee should not be required to disclose publicly.

Because a MET reporting requirement would not provide any public interest benefit and could result in competitive harm, Astrolink opposes the proposed reporting requirement. If the Commission ultimately concludes that such information must be reported to further other regulatory objectives, however, then the Commission should permit the submission of such information on a confidential basis. Similarly, for the same reasons given with respect to MET licensees, Astrolink urges the Commission to eliminate the Ka-band earth station reporting requirement set forth in Section 25.145(g)(2) of the rules or permit the submission of such information on a confidential basis.

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<sup>12</sup> For the same reasons, Astrolink would oppose any proposal to limit Ka-band blanket earth station license renewals to the number of terminals brought into operation at the time of renewal.

<sup>13</sup> See *NPRM*, ¶ 47.

Astrolink also believes that requiring MET licensees to deploy a particular percentage of terminals within a specified timeframe would be contrary to the public interest. There is simply no reason to mandate the pace of MET deployment. Requiring a licensee to bring a certain number of terminals into use within a specified period would impose a substantial and artificial regulatory burden on MET implementation, rather than allowing market forces to guide the deployment of MSS services. Thus, the proposed deployment requirement is unnecessary and would be contrary to the Commission's less restrictive approach to licensing telecommunications services. Astrolink urges the Commission to reject such a requirement.<sup>14</sup>

#### **D. Extension of License Terms**

In the *NPRM*, the Commission also proposes to revise Section 25.121 of the rules to extend the maximum earth station license term from 10 to 15 years.<sup>15</sup> Astrolink believes that extending the maximum earth station license term to 15 years will bring it more in line with the increased operational lifetime of new satellite systems. Accordingly, Astrolink supports the Commission's proposal.

Astrolink believes, however, that the Commission also should consider extending the maximum license period for space station authorizations from 10 to 15 years in the context of this proceeding.<sup>16</sup> As the Commission is aware, advances in satellite technology have extended the operational life spans of satellites, in particular GSO space stations. In view of these

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<sup>14</sup> Astrolink also would oppose any proposal to impose such an implementation requirement on Ka-band blanket earth station licensees.

<sup>15</sup> See *NPRM*, ¶ 44.

<sup>16</sup> Such a modification would appear to fall within the scope of the instant proceeding – Streamlining and Other Revisions of Part 25 of the Commission's Rules Governing the Licensing of, and Spectrum Usage by, Satellite Network Earth Stations *and Space Stations* (emphasis added).

developments, the Commission adopted a 15-year license term for 2 GHz MSS systems.<sup>17</sup> The Commission similarly should extend the license term for other new satellite systems, such as next-generation Ka-band systems, to a maximum of 15 years.

Establishing equivalent earth station and space station license terms is particularly important in the context of Ka-band systems because, unlike many C-band Ku-band earth stations that can communicate with various satellites, Ka-band earth stations are specifically designed to operate with an individual Ka-band system. Extending the license term for Ka-band earth stations without also extending the license term for associated space stations would unnecessarily complicate the provision of Ka-band satellite services. Accordingly, Astrolink urges the Commission to extend the maximum space station license term, as well as the maximum earth station license term, from 10 to 15 years.<sup>18</sup>

#### **IV. ALOHA MULTIPLE ACCESS TECHNIQUES AND KA-BAND SYSTEM**

In response to a petition for declaratory ruling or rulemaking from Spacenet Inc. (“Spacenet”), the FCC proposes modifications to its rules for VSAT earth stations that utilize Aloha random access techniques.<sup>19</sup> Instead of pursuing proposal made by Spacenet in its petition, or the alternative proposal made by Hughes Network Systems (“Hughes”) during the Spacenet proceeding, the Commission proposes to reduce drastically its power spectral density

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<sup>17</sup> Establishment of Policies and Service Rules for the Mobile Satellite Service in the 2 GHz Band, *Report and Order*, IB Docket 99-81, FCC 00-302 (rel. Aug. 25, 2000) at ¶ 103.

<sup>18</sup> In this connection, the Commission could establish a limited filing window during which satellite licensees may request an extension of their license terms. The Commission should permit such requests to be made as letter requests, rather than requiring a formal license modification application. Requests for extensions made after the close of the filing window would be entertained only in the context of a modification or renewal application, as appropriate.

<sup>19</sup> See Petition of Spacenet Inc. for a Declaratory Ruling, or In the Alternative for a Rulemaking to Amend Section 25.134 of the Commission’s Rules, RM-9864 (filed April 5, 2000) (“*Spacenet Petition*”).

limits by 3 dB for earth stations employing Aloha random access techniques as a “more general and simplified approach.”<sup>20</sup> The Commission also invites comment on revising its recently adopted Ka-band blanket licensing rules to impose a similar limitation on Ka-band earth stations using Aloha access techniques.<sup>21</sup> As discussed below, Astrolink opposes the Commission’s proposals concerning Aloha access techniques as overly simplistic and inappropriate in the context of advanced broadband satellite services.

#### **A. The Commission’s Aloha Access Proposal**

As the Commission is aware, time division multiple access (“TDMA”)/Aloha access techniques involve earth stations in a satellite system transmitting at random times. There are a variety of Aloha access schemes, including Aloha (random transmission of packets) and slotted Aloha (transmission of packets beginning at specific times). In an Aloha multiple access environment, a statistically small number of packets may be transmitted simultaneously and will “collide,” and the potential frequency of such collisions varies significantly with the type of Aloha access scheme employed.

In developing its proposed Aloha access rule, the Commission appears to have focused on the slotted Aloha access scheme with a loading of approximately 38% that was considered in the Spacenet proceeding.<sup>22</sup> In that proceeding, the International Bureau concluded based on review of Spacenet’s calculations and the other information in the record, that Spacenet had

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<sup>20</sup> See *NPRM*, ¶¶ 55-56.

<sup>21</sup> See *id.*, ¶ 57.

<sup>22</sup> See *NPRM*, ¶¶ 55-56; see also Petition of Spacenet, Inc. for a Declaratory Ruling that Section 25.134 of the Commission’s Rules Permits VSAT Remote Stations in the Fixed Satellite Service to Use Network Access Schemes that Allow Statistically Infrequent Overlapping Transmissions of Short Duration, or, in the Alternative, For Rulemaking to Amend that Section, *Order*, RM-9864, DA 00-2664 (rel. Dec. 7, 2000) (“*Spacenet Order*”).

demonstrated persuasively that its random access technique does not cause interference to other satellite systems -- even though there is a 4.9% probability of a two-carrier collision under the conditions proposed by Spacenet.<sup>23</sup> Further, as reflected in the Spacenet proceeding, many operational systems currently use Aloha access schemes and no instances of unacceptable interference from use of Aloha access techniques have been reported.<sup>24</sup> However, the Bureau did express concern that harmful interference could be caused to neighboring satellites if there is a significant deviation from the parameters represented in Spacenet's petition.<sup>25</sup>

In the *NPRM*, the Commission rejects the Bureau's conclusions in the Spacenet proceeding and instead suggests that only a much smaller 1% probability of a carrier collision would be acceptable for TDMA/Aloha systems.<sup>26</sup> The Commission provides no justification for its alternative determination, and fails to explain why or how the Bureau's initial conclusions were incorrect. Moreover, the Commission abandons the record of the prior rulemaking proceeding and the proposals made by Spacenet and Hughes to regulate earth stations employing multiple access techniques. Rather than developing a rule that is tailored to address the time-varying nature of potential interference associated with multiple access techniques, the Commission proposes to impose an absolute 3 dB reduction in power limits applicable 100% of the time for all TDMA/Aloha systems, regardless of loading or specific access scheme employed.<sup>27</sup>

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<sup>23</sup> *Id.*, ¶ 12; *see id.* at App. A.

<sup>24</sup> *See Spacenet Petition* at 8; *see also* Comments of PanAmSat Corporation, RM-9864 (filed May 30, 2000) at 2.

<sup>25</sup> *Spacenet Order* at App. A.

<sup>26</sup> *See NPRM* at App. E, Section III.E.

<sup>27</sup> The Commission suggests an across-the-board 3 dB power reduction because the probability of a two-carrier collision is greater than the arbitrary 1% chance deemed "acceptable" in the

*continued...*

**B. The Commission Should Reject an Inappropriate “One-Size-Fits-All” Rule in Favor of a More Tailored Approach**

Astrolink does not support the Commission’s proposed rule changes relating to Aloha multiple access schemes. In a search for a “more general and simplified approach,” the proposed rule sacrifices the operational requirements of all multiple access systems in favor of mere regulatory simplicity. The Commission proposes an absolute 3 dB reduction for *all* Aloha earth station transmissions, even where there is no potential for increased interference 99% of the time. This “one-size-fits-all” approach is not tailored to address the complex issues associated with Aloha multiple access schemes in a manner that both facilitates the implementation of such techniques and adequately protects adjacent satellite operations. In addition, a 3 dB reduction in power density or off-axis e.i.r.p. density levels would render many satellite links unusable, or at a minimum, seriously affect a system’s achievable availability and capacity.

Astrolink also believes that it is important for the Commission to take into account the wide range of Aloha multiple access schemes that might be employed by various systems. In contrast to the VSAT systems considered in the Spacenet proceeding that use Aloha access techniques for all data transmissions, other systems plan to use slotted Aloha for signaling information only (*i.e.*, to reserve a time slot for subsequent TDMA transmissions), which constitutes a very small percentage of total uplink traffic. Because of the importance of the signaling information to provide “bandwidth on demand,” these systems are designed to ensure that the signaling packets are transmitted with a minimal probability for collisions. Accordingly, these systems plan to use a signaling loading in the range of 10% to 20%, resulting in

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*...continued*

*NPRM*, and two earth stations transmitting simultaneously potentially could produce a maximum 3 dB increase in uplink e.i.r.p.



probabilities of two-carrier collisions between 3 and 10 times less than under the conditions proposed by Spacenet (with 38% total channel loading). For systems using partial Aloha multiple access schemes with significantly lower probabilities of two-carrier collisions, such as that described above, the Commission's across-the-board 3 dB reduction is particularly restrictive and unduly burdensome.

In sum, the Commission's overly simplistic approach -- a general reduction in power or off-axis e.i.r.p. density levels -- is completely inappropriate to address the time-varying nature of potential interference that may result from multiple access schemes or to cover the range of Aloha access techniques that may be employed on next-generation satellite systems. Adoption of the proposed "brute force" rule effectively would prohibit systems from implementing innovative Aloha access techniques, even when a multiple access scheme would be much less interfering than the single case considered by the Commission in the Spacenet proceeding. A more flexible approach to regulating systems employing Aloha access schemes is needed.

Instead of an unnecessarily restrictive 100% of the time power reduction proposed in the *NPRM*, Astrolink supports a more tailored approach that addresses the time-varying nature of the potential interference like those developed by Hughes and Spacenet in the original Spacenet proceeding.<sup>28</sup> Such an approach can ensure that the potential for adjacent satellite interference is kept to a minimum while permitting the use of multiple access schemes in the provision of advanced broadband satellite services by taking into account the small probabilities of occurrence of any potential for interference.

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<sup>28</sup> See *Spacenet Petition*; see also Comments of Hughes Network Systems, RM-9864 (filed May 30, 2000) at 4-5.

As discussed above, some systems are planning to use an Aloha multiple access scheme during the transmission of signaling information only. After an earth station has successfully reserved a TDMA time slot, it will cease transmitting Aloha signaling packets and will transmit in standard TDMA mode only. During the standard TDMA transmission period, there is no possibility of transmission collisions and the system should not be constrained by an Aloha access rule during this period. Accordingly, any rule adopted by the Commission should apply only during the period in which an earth station transmits using an Aloha access scheme, and not necessarily 100% of the time.

Finally, Astrolink would note that the Ka-band earth station licensing rules contemplate uplink transmissions in excess of the levels specified in the rules (*e.g.*, in the uplink power control and coordination contexts).<sup>29</sup> Taking into account this difference in the VSAT and Ka-band service rules, the Commission is not constrained to apply Ka-band Aloha system rules in the same manner as Ku-band VSATs.<sup>30</sup> However, Astrolink believes that a tailored approach (like the Spacenet and Hughes proposals) may be equally appropriate for both Ku-band and Ka-band multiple access systems.

## **V. MISCELLANEOUS RULE CHANGES**

The Commission proposes a number of miscellaneous rule clarifications and updates in the *NPRM*. These changes include:

- amending Sections 25.117 and 25.118 to clarify the distinction between major and minor modifications;<sup>31</sup>

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<sup>29</sup> Section 25.138(a)(5) permits Ka-band earth stations to transmit in excess of specified uplink off-axis e.i.r.p. levels during rain fade conditions, including transient periods accounting for up to 0.5% of the time during which the excess is no more than 4 dB. See 47 C.F.R. § 25.138(a)(5).

<sup>30</sup> See *Spacenet Order* at App. A.

<sup>31</sup> See *id.*, ¶ 78.

- eliminating the reference in Section 25.117(a)(1) to coordination under Article XIV(d) of the INTELSAT Agreement given the impending privatization of INTELSAT and the requirements of the ORBIT Act;<sup>32</sup>
- eliminating Section 25.117(a)(2), which originally was adopted to streamline review of transborder service applications, because the Commission's transborder policy has been subsumed by *DISCO I*;<sup>33</sup>
- amending Section 25.117 to cross-reference the Commission's radiofrequency ("RF") emission rules in the context of earth station modifications;<sup>34</sup>
- revising Section 25.113 to state explicitly, in accordance with current FCC policy, that prior authorization for construction of space stations and earth stations is not required;<sup>35</sup>
- amending Section 25.274(g) to clarify that earth station operators are permitted to contact the control centers for the satellite systems with which they communicate in cases of harmful interference, and to rely on the satellite operator to contact control centers of potentially interfering satellite systems to resolve the interference;<sup>36</sup> and
- eliminating as unnecessary Section 25.144(a)(1) (eligibility requirement for specific digital audio radio service ("DARS") applicants), Section 25.141 (licensing provisions for the radio-determination satellite service ("RDSS")), Part 25, Subpart H (authorization to own stock in COMSAT), and references to the INTELSAT Agreement and Inmarsat Convention in Section 25.111(b) because the issues to which they relate are no longer relevant.<sup>37</sup>

Astrolink believes that these changes are necessary to reflect changes in Commission policy and circumstances, and supports their implementation.

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<sup>32</sup> See *id.*, ¶ 80.

<sup>33</sup> See *id.*, ¶ 81; see also Amendment to the Commission's Regulatory Policies Governing Domestic Fixed Satellites and Separate International Satellite Systems, and DBS Petition for Declaratory Rulemaking Regarding the Use of Transponders to provide International DBS Service, *Report and Order*, 11 FCC Rcd 2429 (1996) ("*DISCO I*").

<sup>34</sup> See *NPRM*, ¶¶ 82-83.

<sup>35</sup> See *id.*, ¶ 84.

<sup>36</sup> See *id.*, ¶ 85.

<sup>37</sup> See *id.*, ¶¶ 87-90.

In addition, the FCC proposes to amend Sections 25.211 and 25.212 to state explicitly that the Commission may apply the power limits in those sections in other frequency bands to the extent that power limits have not been established elsewhere in Part 25.<sup>38</sup> Astrolink believes that the power limits developed for C-band and Ku-band are relevant to earth station operations in neighboring frequency bands (*e.g.*, the extended C- and Ku-bands), but may be of limited value in other frequency bands with different operational characteristics. In such circumstances, the Commission may be better served by developing license-specific limits rather than merely adopting power levels developed for unrelated bands or services. Accordingly, Astrolink respectfully requests that the Commission clarify that it proposes to apply the power limits contained in Sections 25.211 and 25.212 only in neighboring frequency bands and where such application would be consistent with the operations proposed.

## **VI. CONCLUSION**

For the foregoing reasons, Astrolink requests that the Commission take action on the issues raised in this proceeding in a manner consistent with these Comments.

Respectfully submitted,

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<sup>38</sup> See *id.*, ¶ 86.